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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/051,887	01/15/2002	Richard N. Blount	017018-54.00US	7948

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EXAMINER

HA, DAC V

ART UNIT	PAPER NUMBER
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2634

DATE MAILED: 02/04/2004

8

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/051,887

Applicant(s)

BLOUNT ET AL.

Examiner

Dac V. Ha

Art Unit

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 January 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4,6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 5-8, 10, 11, 12, 27** are rejected under 35 U.S.C. 102(b) as being anticipated by Ishida et al. (US 5,860,057) (hereinafter Ishida).

Regarding claim 5, Ishida teaches the following claimed subject matter:

“modeling upconversion ... transmitter section” (Figure 6, elements 1, 10, 11, 12; Col. 7, line 52 to Col. 8, line 5);

“compensating for ... composite signal” (Figure 6, element 13; Col. 8, lines 5-12);

“canceling ... for demodulation” (Figure 6, element 18; Col. 8, lines 12-22).

Regarding claim 27, see claim 5 above.

Regarding claim 6, Ishida further teaches the claimed subject matter “wherein ... composite signal” in Col. 7, line 11 to Col. 2, line 22.

Regarding claim 7, Ishida further teaches the claimed subject matter “wherein ... delayed replicated self-generated signal” in Col. 7, lines 52-60.

Regarding claim 8, Ishida further teaches the claimed subject matter “wherein ... imbalance” in Figure 6, element 13; Col. 8, lines 5-12.

Regarding claim 10, Ishida further teaches the claimed subject matter “wherein ... user signal” in Col. 7, line 11 to Col. 8, line 22.

Regarding claim 11, Ishida further teaches the claimed subject matter "wherein ... user signal" in Col. 7, line 11 to Col. 8, line 22.

Regarding claim 12, Ishida further teaches the claimed subject matter "wherein ... user signal" in Col. 7, line 11 to Col. 8, line 22.

Regarding claim 13, Ishida further teaches the claimed subject matter "wherein ... user signal" in Col. 7, line 11 to Col. 8, line 5.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1-4, 9, 14-26** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishida in view of Glas (US 6,330,290).

Regarding claim 1, Ishida teaches:

"canceling self-generated ... for demodulation" (Figure 6, element 18; Col. 8, line 12-22).

Ishida differs from the claimed invention in that it doesn't teach "modeling downconversion ... composite signal". The attention is now directed to Glas.

Glas, in the same field of endeavor, deals with a transceiver, wherein the received signal, after being down-converting, is subjected to compensation unit to compensate for the phase and amplitude imbalances (Figure 2, elements 102, 104; Col.

Art Unit: 2634

2, lines 28-42; Col. 5, lines 49-59). The imbalances in the phase and amplitude of the received signal after down-converting is inherent, and may be caused by the channel and/or local oscillator. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the step of compensating the received signal after down-converting as taught by Glas into Ishida to accomplish a compensated received signal for used in the suppressing the local transmission signal component (in canceling 18). As a result, a more accurate and reliable is provided for demodulation.

Regarding claim 26, see claim 1 above.

Regarding claim 2, Glas further teaches the claimed subject matter "wherein ... imbalance" in Col. 2, line 31.

Regarding claim 25, Ishida teaches the followings.

"a replicator ... modulated user signal" (Figure 6, element 10-12);

"a second compesator ... modulated user signal" (Figure 6, element 13);

"a canceller ... output signal" (Figure 6, element 18).

Ishida differs from the claimed invention in that it doesn't teach "a first compensator ... composited signal". The attention is now directed to Glas.

Glas, in the same field of endeavor, deals with a transceiver, wherein the received signal, after being down-converting, is subjected to compensation unit to compensate for the phase and amplitude imbalances (Figure 2, elements 102, 102; Col. 2, lines 28-42; Col. 5, lines 49-59). The imbalances in the phase and amplitude of the received signal after down-converting is inherent, and may be caused by the channel

Art Unit: 2634

and/or local oscillator. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the step of compensating the received signal after down-converting as taught by Glas into Ishida to accomplish a compensated received signal for used in the suppressing the local transmission signal component (in canceling 18). As a result, a more accurate and reliable is provided for demodulation.

Regarding claim 14, see claim 25 above.

Regarding claim 15, Glas further teaches "whrein ... amplitude imbalance" in Col. 2, line 31; Figure 2, elements 102, 104.

Regarding claim 16, Ishida further teaches the claimed subject matter "wherein ... imbalance" in Figure 6, element 13; Col. 8, lines 5-12.

Regarding claims 17, see claims 15 and 16 above.

Regarding claim 18, the claimed subject matter "wherein ... output signal" would have been optional to one skilled in the art.

Regarding claim 9, see claim 18 above.

Regarding claim 19, Ishida further teaches the claimed subject matter "wherein ... user signal" in Col. 7, line 11 to Col. 8, line 22.

Regarding claims 3, 4, see claims 18, 19 above.

Regarding claim 20, see claim 18 above.

Regarding claim 21, see claim 15 above.

Regarding claim 22, Ishida further teaches the claimed subject matter "wherein ... user signal" in Col. 7, line 11 to Col. 8, line 22.

Regarding claim 23, Ishida further teaches the claimed subject matter "wherein ... user signal" in Col. 7, line 11 to Col. 8, line 22.

Regarding claim 24, Ishida further teaches the claimed subject matter "wherein ... user signal" in Col. 7, line 11 to Col. 8, line 5.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. **Claims 3-4** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. **Claims 3-4** recites the limitation "said upconversion imperfection" in lines 1-2, respectively. There is insufficient antecedent basis for this limitation in the claim.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Jones (US 5,894,496) discloses a Method And Apparatus For Detecting And Compensating For Undesired Phase Shift In A Radio Transceiver.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dac V. Ha whose telephone number is 703-306-5536. The examiner can normally be reached on 5/4.

Art Unit: 2634

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 703-305-4714. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 305-5500.

A handwritten signature in black ink, appearing to read 'Dac V. Ha', with a long horizontal line extending from the end of the signature.

Dac V. Ha
Examiner
Art Unit 2634